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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|------------------------|-------------------------------|------------------------|
| 10/578,393 | 05/05/2006 | Philip Adrian Sjostrom | 2990-1001PCT/US | 1837 |
| 23565 | 7590 | 09/13/2007 | | |
| KLAUBER & JACKSON 411 HACKENSACK AVENUE HACKENSACK, NJ 07601 | | | EXAMINER KLAUS, LISA NHUNG | |
| | | | ART UNIT 2832 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/578,393 | Applicant(s) SJOSTROM, PHILIP ADRIAN | |
| | Examiner Lisa N. Klaus | Art Unit 2832 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 7 and 10-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>7/20/06 and</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(B) as being anticipated by Hanajima (US 4,864,085), figure 4.

Mital discloses a keyboard switch comprising:

- the switch element 12 having a bearer element 23b and a contact element 23a;
- both the bearer element 23b and the contact element 23a being formed from an electrically conductive material and the contact element 23a being formed from a resilient material;

- Regarding claim 2:

- the bearer element 23b and the contact element 23a are of an integral construction;

- Regarding claim 4:

- the contact element 23a is a shallow dome shape.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5, 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanajima in view of Mital (US 4,476,355), figures 5 and 6.

- Regarding claim 3, Hanajima does not disclose the bearer and contact element are separate components assembled together.

Mital discloses the keyboard assembly comprising the bearer element 46 and contact element 44 are separate components assembled together.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to make the bearer element and contact element are separate components assembled together as taught by Mital with Hanajima's switch for the purpose improving the tactile feel of the dome.

- Regarding claim 5 Mital discloses:

- the contact element comprises at least one dimple at or close to the centre of the dome;

- Regarding claim 6 Mital discloses:

- the bearer element 46 comprises a peripheral retainer for the contact element 44.

- Regarding claim 8, Mital discloses:

- the bearer element 46 comprises a planar base to enable it to be affixed to a conductive track on the printed circuit board 22.

- Regarding claim 9, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to use the solder paste to solder the switch element to the printed circuit board for the purpose of keeping the switch element and the circuit board together.

Allowable Subject Matter

3. Claims 7 and 10-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

The prior art does not teach or suggest the switch element for surface mounting onto a printed circuit board comprising the bear element comprises:

- Claims 7 and 14: an inwardly facing C-shaped cross sectional shape to provide a recess to act as a peripheral retainer for the contact element by receiving at least a portion of a rim of the contact element in the C-shaped member recess.

- Claim 10: the planar base comprises an inner periphery with a slight downwards angle to contact a printed circuit board in use and form a barrier against the ingress of soldering fluxes or other residues of a fixing process.

- Claim 11: the planar base comprises an inner periphery with a slight upturned edge.

- Claim 12: at least one bridge around its periphery to enable the bearer element to bridge tracks on the printed circuit board onto which it is mounted in use.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication should be directed to Lisa Nhung Klaus whose telephone number is (571) 272-1993, and whose fax number is (571) 273-8300. In the event that I am not reached, you can contact my supervisor, Mr. Elvin G. Enad at (571) 272-1990 or the tech center receptionist at (703) 308-1782.

Lisa Nhung Klaus

Patent Examiner - Art Unit 2832

August 26, 2007



ANH MAI
PRIMARY EXAMINER

